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LECTURES.

CLINICAL LECTURES ON THE PHYSIOLOGICAL PATHOLOGY OF SYPHILIS.[1]

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In seeking an explanation of the occurrence of this roseolous eruption, we naturally ask, then, What can and is most likely to produce "*long-continued dilatation of capillaries and stasis of the blood?*" Inasmuch as it is known that the capillary vessels derive their nerve supply from the sympathetic nervous system, their loss of contractility, and consequent dilatation, could occur only through some impression upon the sympathetic system, which would cause a paresis, more or less pronounced, of the nerves supplying the walls of the capillaries.

In an article on the Physiology of Syphilitic Infection, published in 1872, I took occasion to discuss the evidences for and against the functional character of the roseola of syphilis. It now appears to me that I cannot do better than to quote the views of authorities on this subject, and my comments upon them at that time, which, after several years of further study and observation in this connection, I find no occasion to alter.

Thus Mr. Erasmus Wilson, a distinguished English authority on diseases of the skin and syphilis, says, "It is now (1871) well understood that the influence of the *vaso-motor nerves* is involved in the production of *roseolas*."

It is proper, however, to state here that while Mr. Wilson describes no less than eighteen varieties of roseola, he practically excludes the roseola of syphilis by attributing its occurrence to the presence of the syphilitic virus in process of expulsion from the system, and by assuming that it may subsequently be developed into other and later manifestations of syphilis. Inasmuch as this idea is, perhaps, the generally accepted one, it appears to me desirable to place the whole matter be-

[1] Concluded from page 400.

fore you in such a way that we may, if possible, be able to determine whether the roseola of syphilis is a true roseola, dependent simply upon an impression made upon the sympathetic nerves, like other roseolas, or whether it is a form of syphilitic manifestation, and pathologically different from other roseolas, which, in some curious and hidden way, gradually develops into other manifestations of syphilis. Mr. Wilson describes it thus: "*Roseola syphilitica* commonly presents itself in the form of undefined patches, giving to the skin an appearance identical with that of the common idiopathic roseola, or measles, and is due, like the two latter, to the manner of distribution of the blood-vessels of the skin. It is preceded by a peculiar fever called the syphilitic, and bears a resemblance in its pathognomonic symptoms to measles, scarlet fever, and small-pox: (1) in the nervous depression, showing the stagnating influence of the accumulated poison; (2) in the congestion of the mucous membranes, particularly that of the fauces, showing the effort made by the blood-vessels to eject the poison through the tissue; and (3) in the cutaneous exanthema, which completes the triumph of the pressure from within, and is the sign that the poison is driven to the surface, and is in process of expulsion." There is, then, no uncertainty about the fact that Mr. Wilson considers syphilitic roseola the result of the process of elimination of the syphilitic material (whatever, in his opinion, that may be) through the skin. This view, elaborated more fully by Mr. Wilson than by any other writer on syphilitic or cutaneous diseases, I do not find contradicted by any except M. Diday, of Lyons, but it is accepted directly or tacitly by all the other authorities I have been able to consult. Very naturally, Mr. Wilson does not stop at this point, but goes on to trace a connection between syphilitic roseola and the subsequent manifestations of the disease. Thus in his last lectures on Dermatology (published in 1871) he says, "Chancre, the focus of inlet of the poison has run its course and healed up. Six weeks afterward, an exanthema, which is identical in appearance with roseola, is developed in the skin. . . . Another six weeks passes by, and a second exanthema appears; no longer a roseola, like the first, but an eruption of *papulæ*, corresponding to the common *lichen*. Then another interval of six weeks transpires, and the eruption may appear for the third time, *but with dimensions still farther augmented*, namely, as a large papule or tubercle." In an earlier work on syphilis he says, "A roseolous patch may be seen to develop papules; . . . and I have furthermore seen the small papule of lichen converted into the larger elevation called *tubercle* by sudden aggravation of the syphilitic fever, or from exposure to cold." It will be remembered that he was previously quoted as saying that "it is now (1871) well understood that *the influence of the vaso-motor nerves is involved in the production of roseolas;*" but it will be observed that for the syphilitic roseola Mr.

Wilson, in the foregoing statement, has assumed a pathological importance, which could not attach to it were it shown to be, possibly, due to the impression made upon the sympathetic nervous system by the syphilitic influence.

Characteristic prodromata are recognized by modern syphilographers as usually associated with the advent of constitutional syphilis in representative cases. They are numerous and varied, as follows: *general malaise, headache, rheumatoid pains*, irregular and chiefly nocturnal, *loss of appetite, indigestion, nausea, diarrhœa, giddiness, mental irritability, sleeplessness, great prostration, unnatural acceleration of breathing on slight exercise;* in some cases *exacerbations of an intermitting fever*, temperature running up to 103° or 104° F., followed by profuse sweats, etc. These are among the most prominent of the prodromata cited by authors, and are grouped together under the general title of *the syphilitic fever.* This title is then applied, not simply to an acceleration of the pulse, elevation of temperature, etc., which is usually understood by the term fever, but any one of the foregoing conditions or symptoms, or any modification or combination of them, occurring about the time of the appearance of the syphilitic roseola, is claimed to merit this title. (Diday uses the more exact and appropriate term *syphilitic prodromes.*) It will then be readily seen that when authors speak of *syphilitic fever* as ushering in, or being associated with, the syphilitic roseola a very considerable degree of uncertainty may be claimed as to the dependence of such varied and common aberrations from the healthy state upon the development of syphilitic roseola. The intimate connection between syphilitic fever and roseola is *not*, however, universally accepted. On the contrary, Ricord says that the syphilitic roseola is *never* associated with fever except as an accidental coincidence, and that when fever is present *it is invariably due to some cause quite independent of the roseola.* Bassereau affirms that it was entirely absent in fifty-six out of the one hundred and ninety-nine cases critically observed by him, *but that it occurred in thirty-four out of fifty cases of the later papular eruption.* Coulson states that one third of the cases of syphilitic roseola are not preceded by *any* premonitory symptoms. McCarthy (quoted by Lancereaux) says that of sixty cases twenty-one had nocturnal cephalalgia alone, eleven cephalalgia and rheumatoid pains, and eight the latter alone, leaving twenty cases, or one third, occurring *absolutely without any premonition of any sort.* Bumstead says that syphilitic roseola is so free from febrile excitement, heat and pruritus, that the patient may not discover its presence except by accident. In one of the cases already presented to you the surprise of the patient on our discovery of the eruption will be recalled, and this, in my experience, has been the rule rather than the exception. Besides the records of observations covering a period of nearly two

years in the Blackwell's Island Venereal Hospital, in 1851 and 1852, and during subsequent years, noting frequent cases in hospital and private practice, I have called especial attention to this matter in every case presenting at my clinic in this college for several years past; and I do not hesitate now to express my entire accordance with the views of M. Ricord, namely, that the syphilitic roseola is *never preceded by, nor associated with*, any fever, pain, or other prodromata that cannot readily and reasonably be accounted for through causes entirely independent of the approach or the presence of the roseola. For almost thirty years past Mr. Wilson has taught without qualification, and almost without contradiction, that syphilis, with roseola as its early exponent, was a mysterious, but a distinct element; that the organism in process of infection was gradually invaded by it, until nature, no longer able to endure its presence, concentrated all her forces, at a given stage, to expel it, and with the directness and urgency of a woman in labor, as he puts it in his climacteric in describing the syphilitic roseola, "*completes the triumph of the pressure from within, and is the sign that the poison is driven to the surface and is in process of expulsion.*"

"In the effort to understand the mysterious workings of syphilis in the human organism, analogical reasoning has naturally been resorted to. From the fact that there occurs an apparent period of rest in its early development, that in certain cases it is associated with varied disturbances of the nutritive functions and of the nervous and vascular systems, that preceding, during, or succeeding these disturbances an exanthematous eruption occurs, it has been the fashion, for want of a better place, to class it among the exanthematous fevers; and further, inasmuch as it has been, to a greater or less extent, an accepted conclusion that these diseases are the result of an effort of nature to get rid of the peccant material causing them, a like interpretation has been seized upon to explain the significance and value of the syphilitic roseola." But it may be urged that, if it is granted that the largest proportion of syphilitic roseolas are ushered in without marked constitutional disturbance, yet in two thirds of the cases reported by McCarthy and quoted by Lancereaux, pains in the head or bones, or both, were present. Was this a simple coincidence, and not the sign that the roseola was in process of development? If there was nothing else, at this stage of syphilitic disease, to account for the constitutional disturbance but the roseola, I should certainly look upon it as a coincidence, simply; first, because the fullest development of the roseola does not relieve the pains, and secondly, because the most profuse roseolas occur independently of them. But I think with a little care we may be able to find another and most important manifestation of syphilis present, with or soon following the advent of the roseola, and that is enlargement and induration of glands and groups of glands, to a greater or less degree, *through-*

out the entire lymphatic system, especially prominent and most readily recognized in the cervical and epitrochlear regions.[1] I pass my fingers along the posterior border of the sterno-cleido mastoid muscle of this patient, with the almost absolute certainty of finding well-marked enlargement of the group of lymphatic glands peculiar to this region, and not only do I find them, varying in size from a small shot to a pigeon's egg, but hard and movable, and also painless, as you may judge by the serene expression of countenance here preserved, under the by no means superficial examination which I am making. I find an enlarged gland, also, over each mastoid process, also in the post cervical region, at several points; also, in the epitrochlear space, just above the bend of the elbow. Here they are most valuable, in a diagnostic point of view, being rarely present before or absent after, the tenth or twelfth week succeeding inoculation of syphilis, whether any roseola can be detected or not. Sometimes only one gland is enlarged, sometimes it is found higher up, along the inner border of the biceps. I also call your attention to two other cases of syphilis, drawn from my service in Charity Hospital (which you may note as VI. and VII.), one in the fourth and the other in the sixth month of the disease, and this simply that you may examine them in regard to the matter of gland enlargements. In each you will find well marked and characteristic hyperplasia, not only of the inguinal glands but of those in the cervical and epitrochlear region. In case VI. you will find absence of enlargement of the epitrochlear gland on the right side, while it is present and as large as a marrowfat pea on the left. What I desire now particularly to show in these cases is the uniformity of the general gland enlargement, and this will be found to hold in all cases, to a greater or less degree. Where you do not find them after the third month of the disease it will be because the examination has been interfered with by excessive accumulation of adipose tissue, or because the examination has been inefficiently conducted. It may be still held as an open question as to whether this gland enlargement, remote from the point of inoculation, takes place by means of cell elements carried from the glands first affected directly to glands remote from the point of inoculation by chan-

[1] "Its occurrence in the lymphatic glands in the interior of the body has also been verified in post-mortem examinations by Von Barensprung and Virchow." (Beaumler, Ziemssen's Encyc., vol. iii., p. 182.) Also, "In the collection of the Hôpital de Lourcine, there are those preparations of women who died of intercurrent diseases, while affected with syphilitic sores on the vulva. In these preparations, not only the inguinal glands are swollen, but there is a hyperplastic enlargement of a number of glands above Poupart's ligament. In the second case, there occur in the fossæ iliacæ, along the blood-vessels, nine enlarged glands, arranged in three groups, one above the other, the uppermost at the origin of the art. hypogastrica. The enlargement of the glandulæ iliacæ had attained nearly the same degree as that of the gl. inguinalis, among which, one or two on each of the three preparations were distinguished, through their greater size, as the ones first attacked." (Ibid., page 122. 1875.)

nels not yet fully demonstrated, or whether they receive the syphilitic infection primarily through cells carried out by the blood current at the period of general infection or dissemination of the diseased germs. The fact that general gland enlargement is sometimes present before the appearance of the roseola is considered evidence in favor of the former view.[1] Of one thing, however, we are certain, namely, that at about the time, within a very few days, of the appearance of the roseola (sometimes before, sometimes after), this characteristic general gland hyperplasia takes place; that, in connection with this enlargement, a marked proportional increase of the white blood cells over the red has also been observed.[2] Now we have arrived at a point where, perhaps, we may be able to account for some of the so-called prodromata of the syphilitic roseola, without the necessity of considering them the result of nature's effort to expel the unknown element, in opposition to all known physiological laws, through the skin and mucous membranes. We have here a well-marked disturbance in a system of important functional use, one now recognized as occupying a place of acknowledged value among the hæmatopoietic organs; we have a condition which admits of explanation through known physiological processes, fully competent to cause all the nutritive, nervous, and vascular disturbances which have been recited under the title of *syphilitic fever*, or the prodromas of syphilitic roseola.

And now as to the cause of the roseola. We may accept it as localized hyperæmia, due, as Mr. Wilson says, "to the manner of distribution of the blood vessels of the skin," as in the common idiopathic roseola, the single patch of the eruption of which "represents the ramifications of a single arterial trunk," or "the small district of skin, the circulation of which may be governed by the ultimate divisions of one small nervous twig," a branch of the great sympathetic nervous system. Virchow states that on a section of the sympathetic nerve in the neck of an animal, "a state of hyperæmia ensues in the whole of that half of the head. The ears become dark red, *the vessels greatly dilated*, the conjunctiva and nasal mucous membrane turgidly injected; and this," he says, "may continue for days, or weeks, or months, without the least appreciable nutritive disturbance necessarily arising thereupon."[3]

From deductions based upon the electric experiments of Claude Bernard, upon a bisected sympathetic, he states that, "whether the relaxation of the muscular fibres of a vessel be produced directly by a par-

[1] Beaumler says: "It is probable that the poison circulating in the blood may cause hyperplasia of the lymphatic glands directly, for sometimes we see these glands reacting to the poison before the skin or mucous membranes." (Zeimssen, vol. iii., page 181.)

[2] Section of these hyperplasic glands is found under the microscope to present the same closely packed cell accumulation which has been seen in immediate connection with the initial lesion of syphilis, and in lymphatic glands in direct connection with it.

[3] Physiology of Syphilitic Infection. Otis, 1872.

alysis of a nerve, or by an interruption of the nervous influence, or whether it be the indirect result of a previous stimulation, giving rise to exhaustion, in every case, we have to deal with a *kind of paralysis* of the walls of the vessel, and that the process is incorrectly designated *active* hyperæmia, inasmuch as the condition of the vessels is always a completely passive one." Belladonna is well known as a relaxing agent in nerve tissue notably seen in its effect upon the iris, and also in the production of an eruption in some respects similar to the roseola of syphilis. Mental emotions are also recognized as the cause of contraction of the calibre of the blood capillaries, producing pallor, and dilatation producing the blush. Also, in producing an eruption similar to the roseola of syphilis. I had, some time since, under my care a lady upon whom an eruption, in no way to be distinguished in appearance from a classical recent syphilitic roseola, was brought out upon the breast, back, and arms, chiefly, however, upon the neck, whenever she was subjected to any unusual mental excitement, and which remained distinct for several hours. And another case, at the present time (1879) under my care, when the passion of anger, or a sudden pleasure, or sense of mortification, will bring out a roseolous eruption, while a paroxysm of grief, no matter how severe, will have no such effect. We know that similar roseolas are initiated by digestive derangements and other causes that can be referred only to impressions made upon the sympathetic nervous system. Is it then remarkable that a cause dependent upon actual and more or less sudden changes in the blood proportions and quality should be found capable of producing equally important effects? May we not then reasonably infer from the foregoing, and in the absence of any other explanation of it, and of any proof to the contrary, that the syphilitic roseola is, like the simple roseolas, the result of an impression upon the sympathetic nervous system, a paresis of the vaso-motor nerves of the cutaneous envelope, caused by a special but limited paralyzing influence exerted upon the great sympathetic nerve, through positively recognized blood changes, immediately preceding, accompanying or following an initiation of the so-called secondary or active period of syphilis? This period, from a physiological point of view, I have ventured to term THE PERIOD OF GENERAL INFECTION AND SUBSEQUENT LOCALIZED CELL ACCUMULATION.

A PLEA FOR THE LANCET.

BY T. H. BUCKLER, M. D., BALTIMORE.

No one familiar with mortuary tables can have failed to observe the long list of deaths from pneumonia during the past winter in all the Atlantic cities. Unfortunately only the fatal cases are recorded, there being no note as to the number of pneumonias or of pleuro-pneumonias

from amongst which this heavy necrology was drawn; nor is any hint given as to the relative value of different plans of treatment. The question naturally arises, Did this great mortality result, there being no percentage to guide the inquirer, from an unusually large number of cases, or from treating the average amount of pneumonias injudiciously, by the use of nutritives and stimulants alone? A prominent teacher of anatomy said to his class, a few years ago, that it would be useless for him to teach the surgical relations of the superficial veins of the arm, since the lancet, by the common consent of the profession at large, had been sheathed, never to be drawn again. It may be inferred, therefore, that the cases occurring during the past winter were conducted without venesection, and that the treatment consisted mainly in the use of stimulants, as advised by Brown of Edinburgh and the late Dr. Todd, who, at King's College, often gave his patients laboring under pneumonia as much as thirty-six ounces of brandy in twenty-four hours. No two dogmas have obstructed the progress of rational therapeutics half so much as the stimulating and contra-stimulating doctrines, the advocates of each method having waged a war of opinion against the other with the pertinacity of heroes; and, blinded by party zeal, neither faction was able to perceive that these doctrines, while seemingly opposed to each other and entirely antagonistic, would if applied contemporaneously in the same subjects accomplish in different ways identical and most salutary results. Mr. Brown-Séquard discovered and has taught beyond the power of contradiction that the stimulant to the nerves of respiration is the arrival of carbon at the lungs, and when, under febrile disintegration and metamorphosis of the tissues, carbon is sent to the lungs in great abundance, the respiration becomes exhaustingly exaggerated in frequency. The way to allay this exalted respiration, lessen its rapidity, and calm irritability of the pulmonary vasomotor and branches of the par vagum nerves is to give brandy to the extent of producing and keeping up a condition of semi-inebriation, — to a child a full teaspoonful, and to an adult a tablespoonful, every two hours. At the same time free and successive bleedings should be adopted to drain the lungs, relieve pulmonary congestion, diminish vascular tension, put the circulation in a siphonic state, thereby removing pressure of blood from the morbidly dilated and disabled capillary vessels, thus enabling their coats to gather up and assume their elasticity and healthy power of contraction.

I saw at Washington, in consultation with three physicians, Commodore R., aged sixty-four. He labored under pneumonia attended with coma and stertor, and when waked muttering delirium took their place; the tongue was covered with a thick, dark, and dry coating; the pulse was frequent, and the respiration rapid; there was also great prostration, dorsal decubitus, with inability to turn on either side without assistance. Commodore R. had the leucophlegmatic cast of countenance, and his

complexion was of a deep, dusky red, especially about the cheeks; his weight would probably have exceeded two hundred pounds. The entire three lobes of the right lung were in the second stage of red engorgement, without redux rattle or other sign of resolution; he coughed up moderate quantities of rust-colored sputa. Altogether it was one of the most unpromising cases of pneumonia I remember ever to have seen. The late Dr. Miller advised bleeding, one venesection having already been performed, with calomel and antimony in small doses, while his two other attendants, imbued with modern doctrines and well read in their profession, recommended stimulants. It was advised that the opposite views of both sides be conjointly adopted; that the commodore could not recover under the use of the lancet, sedatives, and alteratives only, neither could he get well under the exclusive use of nutritives and stimulants, but if both procedures, however opposed and contradictory they might seem, were faithfully carried out, the chances were that he would get well. He was largely bled again on that and the following day, took a tablespoonful of brandy with a cup of beef tea every two hours, and recovered without impediment or difficulty of any kind. The effect of the brandy in arresting metamorphosis of the tissues, and thereby preventing the arrival of carbon, the stimulant of respiration at the lungs, was noticeable by the marked reduction in the frequency of respiration.

If time and space permitted, there could be given a number of other cases which occurred during the past twenty years, in which the stimulating and contra-stimulating theories were conjointly and contemporaneously carried into practice with like favorable results. How is the lancet to be dispensed with in the uræmic convulsions of eclampsia and scarlatina, resulting in both instances from congestion of the kidneys? In what manner is the accumulation of blood in the vessels of the kidneys to be relieved and removed except by copious depletion? What other modes have modern therapeutists to suggest as a means of promptly restoring the healthy functions of kidneys deluged with blood, or of relieving the congestions which, without depletion, have for their sequences such formidable and fatal results? Are the convulsions symptomatic of kidney congestion to be ministered to by giving ether or chloroform, thereby stifling nature's cries for relief, augmenting the kidney congestion, and accelerating with certainty the fatal issue?

After treating, in a group, three children laboring under scarlatina, and losing two of them from uræmic convulsions, the third and last attacked, a child two years old, betraying like symptoms, coma and convulsions, was bled from the arm to the extent of four ounces; and eight hours having elapsed, three more ounces were taken with marked benefit to the coma with subsultus and threatened return of the convulsions. This child recovered without other bad symptoms or sequelæ

of any kind. There is no condition in which patients bear and require such large losses of blood as in eclampsia.

Mrs. W., having suffered with œdema of the lower extremities before confinement with her third child, was seized soon after labor had begun with severe convulsions, for the relief of which a vein was opened in the arm, and some twenty-five ounces of blood were drawn. Shortly after the bleeding, the membranes, without being meddled with, were ruptured, the liquor amnii was evacuated, and the labor progressed rapidly without assistance of any sort, until the head began to press on the outer strait, when the convulsions again returned. The bandage was removed from the arm, and the vein allowed to bleed to the extent of fifteen ounces more, when the convulsions ceased, and a male child was born. Some tincture of nux vomica was given and repeated to restore tone to the nerves of the kidneys, which soon began to act freely, and the patient recovered without further untoward symptom of any sort. If bleeding in this class of cases is to be abandoned altogether, what restorative agency do advanced modern therapeutists propose to set up in its place? At the very time that Dr. Todd was giving brandy, as in his judgment the sole and only indispensable agent required in the treatment of pneumonia, M. Grisolle was experimenting as to the therapeutic efficacy of loss of blood in greater or less quantity, and each doubtless thought the other a fit subject for a mad-house. How fortunate it would have been if, abandoning preconceived ideas and prejudice, these honest searchers after truth could have become co-workers, and have put their seemingly antagonistic theories to the crucial test of applying them conjointly and contemporaneously in the same cases of pneumonia. If M. Grisolle, when bleeding his patients largely and successively, had given them a cup of beef tea and a tablespoonful of brandy every two hours, does any one doubt that his list of recoveries would have been much larger and longer?

A CASE OF FATAL ILEO-CÆCAL INTUSSUSCEPTION.

BY LOUIS STARR, M. D.,

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JOHN ——, fifteen years of age, a cabin-boy, was admitted to the Episcopal Hospital on February 22, 1876. He had a healthy family history, and, as far as he remembered, had always been perfectly well until February 14th, eight days before admission. At this date, without any assignable cause, he began to have paroxysms of severe pain in the abdomen. These paroxysms at first were of short duration, and occurred only at long intervals, but rapidly became so frequent and prolonged as totally to unfit him for duty; there was, however, no other indication of gastric or intestinal derangement, except loss of

appetite. When he came into the hospital he was quite weak and anæmic, the intervals between the attacks of pain were short, and there was some tendency to nausea and occasional vomiting. The latter symptoms were quickly relieved by treatment; the pain, on the contrary, remained unabated until March 17th, when improvement began and continued for six or seven days, during which the patient was free from suffering, had a fair appetite, and was able to be up and about the ward. Afterwards the pain returned with renewed intensity, the intermissions growing shorter and shorter, and for the week preceding April 15th, when I first saw him, it had been almost constant, and subject to frequent exacerbations, when the agony was nearly unendurable.

On the morning of the 15th I found him in acute pain, screaming at the top of his voice, and tossing about in bed, with his hands pressed on his abdomen and his thighs drawn up. A hypodermic injection of one fourth of a grain of sulphate of morphia was given, and as soon as he became quiet a careful examination was made. There was considerable emaciation, and evidently great prostration. His lips were bloodless, his eyes sunken and surrounded by dark circles, and his skin was pale. His tongue was heavily coated, his breath foul; he had little appetite, according to the statement of his attendants, and even the small quantity of food taken augmented the pain. There was, though, no nausea or vomiting, and the bowels were moved once or twice daily, the stools being liquid, dark green in color, and at times containing small clots of blood. The abdomen was natural in shape; there was slight distributed tenderness on pressure, and rigidity of the abdominal muscles, but no tumor could be detected by either palpation or percussion. The pulse was feeble, about 120 per minute. The heart and lungs were healthy, the areas of hepatic and splenic dullness normal, and the urine was voided freely and was unaltered in composition. The treatment adopted was one sixth of a grain of sulphate of morphia hypodermically every six or eight hours, according to the degree of pain, two grains of sulphate of quinia thrice daily, one fluid ounce of sherry wine every four hours, and a liquid diet.

For the next three days, with the exception of increasing weakness and occasional tenesmus and pain and difficulty in urination, there was no change in the symptoms. At the end of this period a dose of castor-oil was administered; its operation was attended with severe tenesmus, and the evacuation was liquid, greenish, very offensive, and contained numerous small masses of blood-stained mucus and black granular matter resembling gunpowder.

On April 19th the patient was etherized, and the rectum and bladder examined with negative results, but in the upper portion of the left iliac region a small oblong tumor was discovered. Although the nature

of this tumor was doubtful, *forced enemata* were ordered. The first injection was given on the afternoon of the 19th, several pints of tepid water being thrown gradually into the intestine through a flexible gum tube gently introduced as high as the sigmoid flexure. Very little returned except the fluid injected and a small quantity of bloody mucus and granular matter of the same character as that previously voided by stool. Nevertheless the pain and tenesmus were greatly lessened, and the patient passed a comfortable night, no anodyne being required.

The enemata were repeated daily until April 24th, bringing away small lumps of hardened fæces, with a diminishing proportion of bloody mucus. During this interval also the boy's general condition improved greatly, his tongue cleaned, his appetite returned, there was very little pain, and the tumor and the abdominal tenderness disappeared. The hypodermics of morphia were suspended, and the quinia was increased to two grains four times daily, administered in pill with an equal quantity of carbonate of iron; no alteration was made in the allowance of wine or in the quality of the food, though the amount of the latter was considerably augmented.

On the 24th and 25th he had several semi-solid evacuations without the aid of clysters. For the next four days the improvement continued, he was able to be out of bed for an hour or more each day, the stools were perfectly natural in form, color, and consistency, and he seemed to be convalescent. On April 30th there was a slight return of the pain and tenderness, and from this date up to May 15th his condition varied greatly, sometimes being quite comfortable, while at others he suffered enough to require a hypodermic of morphia. The pain was twisting in character, and occurred in irregular paroxysms, but as a rule was most intense immediately before and after defæcation, which act took place once or twice daily. It had no fixed seat, was always accompanied by rigidity of the abdominal muscles and borborygmi, and occasionally seemed to be excited by pressure upon the abdomen. Enemata were again resorted to with only trifling benefit.

On May 15th the pain became more continuous, and there was slight diarrhœa. The hypodermics of morphia and the quinine and iron were discontinued, and a pill containing one third of a grain of opium, half a grain of ipecacuanha, and one third of a grain of "blue mass" was ordered every four hours. Under this treatment the diarrhœa subsided, after lasting nearly two days, but returned in a more aggravated form and attended by tenesmus three days later, the relapse having been apparently brought about by eating an apple, obtained by stealth, some of the seeds and small, undigested portions of the fruit being found in one of the evacuations. The stools were liquid, dark yellow, very offensive, and numbered from six to eight in twenty-four hours. On May 22d the evacuations again contained blood and mucus; the patient

at the same time became weaker, his pulse was more frequent, and the surface temperature was elevated.

On May 23d the diarrhœa suddenly ceased and vomiting set in, with great thirst, complete anorexia, increasing prostration, coolness of the surface, and almost constant, violent twisting pain and marked tenesmus. The left iliac and lumbar regions were moderately distended, and percussion in these situations was somewhat painful and dull; the rest of the abdomen was normal, except during the severer paroxysms of pain and straining, when it became knotted. The pills ordered on the 15th were stopped, milk with lime-water, beef tea, and wine were given in small doses and at short intervals, and a slight degree of narcotism was maintained by sulphate of morphia administered endermically. Throughout the 24th the vomiting continued, and as there had been no evacuation of the bowels an enema was given, bringing away a small number of scybala and a little bloody mucus. The boy's general condition grew steadily worse, though still hardly as bad as it had been in the early part of pril.

When I saw him next day a great change had taken place: he was very pale, the nose and extremities were cold, the face was anxious, the body wasted, the pulse 130 a minute and very feeble, and the respiration hurried. His tongue was dry and red, there was intense thirst, and everything taken into the stomach was rejected. The abdomen was moderately distended, slightly tender to the touch, and tympanitic on percussion, save in the left iliac and lumbar regions, where there was decided dullness. The decubitus was left lateral, with the thighs drawn up, and while this position was maintained the pain, though constant, was not severe, but it became so as soon as he turned; at such times the recti muscles grew tense, and the intestines toward the right side bulged out and thrust forward the abdominal wall. There had been no evacuation of fæces or flatus by way of the anus. Digital examination of the rectum revealed nothing abnormal, and the urine, which had to be withdrawn by a catheter, was again tested and found to be healthy. As it was impossible to supply a sufficient amount of nourishment by the mouth, even tablespoonful doses of milk being retained for a short time only, directions were given to inject into the rectum two fluid ounces of beef tea every four hours, and to give a teaspoonful of milk and a teaspoonful of brandy in alternate doses every half hour; light poultices were also applied over the abdomen, and the influence of morphia was kept up as before.

On the 26th and 27th the prostration became even more marked, the pulse was almost imperceptible, the surface of the body felt cold to the hand, and the morning and evening temperature taken in the axilla ranged from 95.5° to 96° F. There was no discharge of fæces or flatus, and the pain and tenesmus were very great until the morning of

the 27th; afterward the general sensibility seemed to be partially abolished, and both symptoms were less marked. The vomiting continued up to the date of death, early on May 28th, the matter ejected having no fæcal odor, and consisting chiefly of water, of which the patient drank large quantities, and which was returned almost as pure as when ingested.

A post-mortem examination was made seven hours after death. The body was greatly emaciated, and there was but slight rigor mortis. When the abdominal cavity was opened, the small intestine was found to be considerably distended, partly concealing the transverse and descending portions of the colon, which formed the sheath of an invagination involving the lower part of the ileum, the cæcum, and the ascending colon. The intussusception occupied a somewhat lower position in the abdomen than that usually held by the transverse colon, and the angle made by the junction of the latter and the descending colon was more obtuse than usual, so that the gut from the beginning of the inversion to the sigmoid flexure formed a curve occupying the upper half of the umbilical and the right borders of the left lumbar and iliac regions. No adhesions could be seen at the point of entrance of the ileum, and as far as the finger could be passed between the internal and middle layers the opposed serous surfaces were found to be perfectly free from them; nevertheless the intestine could not be retracted, even when considerable force was applied. The *intussuscipiens* or sheath of the volvulus — composed of the transverse colon and the upper part of the descending colon — was much corrugated, and when laid open the mucous membrane lining its interior was observed to be congested, thickened, and thrown into transverse folds resembling valvulæ conniventes. The *intussusceptum* or received portion — comprising the middle and internal layers — measured twelve inches in length, and was bent upon itself, the convexity looking downward and forward. The middle coat — formed of the inverted cæcum and ascending colon — was, like the sheath, much corrugated; its outer or mucous surface was greatly congested, the congestion increasing from above downward, and passing suddenly into an almost gangrenous condition at a point an inch and a half above the lower end, the line of demarkation extending obliquely around the intestine just below the ileo-cæcal valve, the thickened lips of which occupied a position upon the upper surface of the intussusceptum, coming in contact with the mucous membrane of the sheath. The internal layer — composed of the lower part of the ileum — was slightly twisted, but not sufficiently so completely to obliterate the canal, as a good-sized sound could be inserted through its entire length. The opposed serous surfaces of the middle and internal layers were congested, especially at the point of entrance of the ileum, but there were no adhesions until the seat of extreme congestion below the valve was reached; here the layers became intimately

blended, though on making a vertical section they were readily traced, and what appeared to be the distorted vermiform appendix was seen in the bottom of the pouch of the inverted cæcum. The small intestine above the position of the inversion was considerably distended, and was partially filled with brownish-yellow liquid, while its mucous membrane was slate-gray in color, thickened, and congested; these changes were greatest in the ileum. The intestine below the invagination was collapsed; the descending colon contained a small quantity of coagulated blood, and its coats were much thickened; in the sigmoid flexure there were two collections of grayish-black material, — blood and hardened fæces, — forming together a mass as large as a hen's egg; the rectum was congested. The mucous membrane of the stomach presented the characteristics of chronic catarrh. There was no peritonitis, and the rest of the abdominal viscera, together with the heart and lungs, were perfectly healthy.

In this case the seat of the invagination, the probable exciting cause, the age of the patient, the long duration of the illness, and the total absence of fæcal vomiting, even when the other symptoms became so marked as to leave no doubt as to the diagnosis, are points worthy of consideration.

As determined by the post-mortem examination, the invagination belonged to that form of "inflammatory intussusception" known as *ileo-cæcal*. Of the four principal forms of intussusception, this one is most often met with, the relative frequency, for all ages, being, according to the statistics of Dr. William Brinton, ileo-cæcal fifty-six per cent., ileac, twenty-eight per cent., colic twelve per cent., and jejunal four per cent. This proportion, however, varies considerably with the age; for while ileo-cæcal inversion occurs even more frequently in childhood (especially during the first year, when it ranges as high as seventy per cent.), in adults the ileac and ileo-cæcal occur almost equally often, though both forms are less common than in early life.

Suitable conditions for the occurrence of intussusception are presented whenever paralysis of a limited portion of the intestine is associated with violent peristalsis in an adjoining higher section. These conditions may result from blows upon the abdomen, severe "fæcal stasis," distention by flatus, chronic diarrhœa, dysentery, typhoid or tubercular ulceration, tubercular peritonitis, and cancerous deposits in the coats of the intestine. Under these circumstances the paralyzed segment may become the sheath of the intussusception, but this portion is probably much more frequently inverted by the vigorously contracting bowel above, and carried with it into the normal intestine below, forming thus the middle layer, as in this way only can the fixation and the, at times, rapid growth of the invagination be accounted for, the first depending upon, and the second being greatly aided by, the presence of muscular

contractility in the sheath. Independently of lesions, there is in the inequality which always exists in the calibre of the ileum and cæcum, and between the active peristalsis of the former and the sluggishness of the latter, a normal approximation to these conditions which renders ileo-cæcal inversion very apt to occur. Other causes are spasm of the muscular fibres of the ileo-cæcal valve, and in about five per cent. of the cases the presence of a polypus attached to the wall and extending into the lumen of the intestine. Finally, invagination is sometimes preceded by attacks in which the symptoms resemble those of the true lesion; sometimes, too, it occurs suddenly in the midst of apparent health. In the case under consideration the history shows throughout a tendency to intestinal derangements, probably brought about by the bad food and hardships incident to a life at sea. It is difficult to establish the nature of the primary attack more definitely than to refer it to this tendency. Neither can an absolute conclusion be reached in regard to the attack that followed toward the end of March. But considering the grave type of the general symptoms, the existence of a tumor in the left iliac region, the severe tenesmus, the character of the dejections, the inordinate action of a small dose (two fluid drachms) of castor-oil, and the effects of forced enemata, both as to the material brought away and the rapid improvement which followed their employment, there are some grounds for the belief that there was an obstruction, perhaps an invagination, at the lower part of the colon. The late discovery of the tumor being explained by the difficulty experienced in exploring the abdomen, and the absence of vomiting by the distance of the supposed lesion from the stomach. The symptoms that ushered in the last attack were unquestionably due to an inflammatory condition of the intestinal canal. The attack itself may, I think, be divided into a brief primary stage of slight febrile reaction and diarrhœa accompanied by the expulsion of masses of blood-stained mucus, and a secondary stage of longer duration in which there was complete obstruction and collapse ending in death.

Although invagination is particularly a disease of early childhood, it nevertheless happens sufficiently often in youth and adult life to prevent this case being considered exceptional in regard to age. The greater liability in childhood depends upon the mobility of the cæcum and ascending colon, the tendency to irregularity and want of coördination in the movements of different portions of the intestines, the susceptibility of the mucous membrane of the bowels to irritants, the frequency of intestinal disorders at this age, and also the disproportion between the length of the large intestine and the space which it occupies, — a disproportion which does not exist to the same extent in adults, and which causes folding of the intestine upon itself.

The whole course of the patient's illness, counting from February

14th, when the symptoms first appeared, to May 28th, the date of death, was very long, but the final attack, beginning on May 22d and ending on May 28th, corresponds very nearly in duration with the majority of primarily fatal intussusceptions.

Stercoraceous vomiting, though a frequent, is not an essential symptom of intussusception. Adopting the theory of Brinton, that fæcal vomiting is due to a reverse axial current in the contents of the intestine, and not to anti-peristalsis, it is apparent that while for the occurrence of this symptom at all the obstruction must be either in the large intestine or the lower part of the ileum, the date of its onset depends upon the distance of the obstruction, or starting-point of the reverse current, from the stomach, and upon the rapidity with which the bowel above becomes filled by ingestion and secretion. When, therefore, we consider the irritability of the patient's stomach, causing everything to be rejected almost as soon as swallowed, the short duration of the attack, the distant seat of the obstruction, and the comparatively empty condition of the small intestine as seen at the autopsy, the non-appearance of fæcal vomiting would seem more natural than the reverse.

In treating the patient my efforts were directed throughout the last two attacks to the accomplishment of three results: first, the removal of the obstruction or the reduction of the invagination by forced enemata of tepid water; second, the alleviation of pain and the reduction of the peristaltic movements by the free administration of opium; and, third, the maintenance of strength by the use of concentrated nourishment and alcoholic stimulants. In the interval the treatment was chiefly tonic and supporting. There was so much prostration during the last attack that the idea of operative interference was never seriously entertained.

RECENT PROGRESS IN THERAPEUTICS.[1]

BY ROBERT AMORY, M. D.

The Action of Cholagogues on the Dog. — A final report on the biliary secretion of the dog with reference to the action of cholagogues[2] to the British Medical Association, by Prof. William Rutherford and Messrs. Vignal and Dodds, is a continuation of the research, abstracts from which have been previously published in the JOURNAL.[3] This portion of the report on an important therapeutical subject is very voluminous, and a limited space will not permit us to give even an outline of the details of the work without detracting largely from its merits, and there-

[1] Concluded from page 412.

[2] British Medical Journal, December 21, 1878, January 11, 18, 25, February 1, 8, and 15, 1879.

[3] March 16, 1876, and March 22, 1877.

fore we merely transcribe the summary of the third series of cholagogues as it is originally given by the authors, and refer our readers for the methods of experimentation to the numbers of the JOURNAL alluded to:

"(28.) Calabar bean stimulates the liver, but not powerfully, unless it be given in very large doses.

"(29.) Atropia-sulphate antagonizes the effect of calabar bean on the liver, and thereby reduces the hypersecretion of bile produced by that substance. It does not, however, arrest the secretion of bile, and when given alone does not notably affect it.

"(30.) Menispermin does not stimulate the liver. It slightly stimulates the intestinal glands.

"(31.) Baptisin is a hepatic, and also an intestinal stimulant of considerable power.

"(32.) Phytolaccin is a hepatic stimulant of considerable power. It also slightly stimulates the intestinal glands.

"(33.) Acetate of lead in large doses somewhat diminishes the secretion of bile, probably by direct action on the liver.

"(34.) Ammonium-phosphate is a moderately powerful stimulant of the liver. It does not stimulate the intestinal glands.

"(35.) Tannic acid does not affect the secretion of bile.

"(36.) Hydrastin is a moderately powerful hepatic stimulant, and a feeble intestinal stimulant.

"(37.) Juglandin is a moderately powerful hepatic, and a mild intestinal stimulant.

"(38.) Sodium-benzoate is a powerful hepatic stimulant. It is not an intestinal stimulant.

"(39.) Ammonium-benzoate stimulates the liver, but not so powerfully as the sodium-salt of benzoic acid. It does not stimulate the intestinal glands.

"(40.) Benzoic acid stimulates the liver, but owing to its insolubility its action is less rapid and much less powerful than that of its alkaline salts.

"(41.) Sodium-salicylate is a very powerful hepatic stimulant. It does not notably stimulate the intestinal glands.

"(42.) Sodium-chloride is a very feeble hepatic stimulant.

"(43.) Sodium-bicarbonate has scarcely any appreciable effect as a hepatic stimulant, even when given in very large doses.

"(44.) Potassium-bicarbonate feebly excites the liver, and that only when given in very large doses.

"(45.) Potassium-iodide has no notable effect on the biliary secretion.

"(46.) Sulphate of manganese does not excite the liver, though it is a powerful excitant of the intestinal glands.

"(47.) Morphia has no appreciable effect on the secretion of bile, and does not prevent the stimulating effect of such a substance as sodium-salicylate.

"(48.) Hyoscyamus does not notably affect the biliary secretion, and does not interfere with the stimulating effect of such a substance as sodium-salicylate.

"(49.) Pure diluted alcohol does not affect the biliary secretion.

"(50.) Jaborandi is a very feeble hepatic stimulant.

"All the above conclusions are based on experiments performed on the dog, and have no reference to any observations made on the human subject. Young dogs secrete, in proportion to their size, more bile than old dogs; we have, as far as possible, taken these points into consideration, and the summary of results above given contains the conclusions at which we have arrived.

"*Results of Experiments with Iridin and Euonymin on Man.* — Although we must leave to our medical brethen the task of testing on the human subject the effects of baptisin, sanguinarin, phytolaccin, hydrastin, etc., it will doubtless be of service if we here recount our experience of the use of iridin and euonymin. We have found four grains of iridin — made into a pill with a confection of roses, and taken at bed-time — a certain remedy for biliousness. It produces no disagreeable sensations, and, on awaking in the morning, the yellow tongue is found to be clean, and the headache and malaise gone. As iridin, though a powerful hepatic, is not a powerful intestinal stimulant, it is well to give in the morning an ordinary mild saline aperient, such as Pullna water or some other. But iridin, though an agreeable remedy at the time, has a somewhat depressing effect, and it probably should not be taken oftener than once a week or so. Euonymin is a hepatic stimulant in man as in the dog. Two grains of it, made into a pill with confection of roses, and taken at night, seem to be as efficient a remedy for biliousness as iridin. If the dose be not too great it leaves no depression. As it is a feeble intestinal stimulant, it is well to follow it in he morning by a dose of Pullna water or other saline aperient. I have been much struck with the success of euonymin in functional hepatic derangement in several persons who had tried nearly all the commonly used cholagogues with varying and often limited success. I have no doubt that, in consequence of our experiments, euonymin will come to be a universally employed hepatic stimulant.

"*Mode of Action of Hepatic Stimulants.* — But although we have definitely proved that a large number of substances stimulate the liver to secrete more bile, we do not profess to have absolutely shown in what manner they do this. It may be asked: (1.) Do they excite the mucous membrane of the duodenum or other part of the small intestine, and thereby induce reflex excitement of the liver? One would be readily disposed to entertain this idea from the fact that stimulation of the oral mucous membrane so readily induces secretion in the salivary glands; yet we are obliged to reject the idea that this likewise holds true of the

liver, because such substances as gamboge and magnesium-sulphate powerfully irritate the intestinal mucous membrane, but do not in the least increase the secretion of bile. On the other hand, such substances as ipecacuan, sodium, and ammonium-benzoate powerfully excite the liver without inducing any notable excitement of the intestine. (2.) Do these substances stimulate the hepatic cells by merely increasing the stream of blood through the liver? Whatever be the state of the hepatic vessels during increase of the biliary secretion, it is quite certain that increased secretion of bile does not necessarily follow dilatation of the intestinal capillaries, the effect of which, if it be not carried to excess, may with reason be supposed to increase the stream of blood through the portal vein, and thence through the liver. But castor-oil greatly dilates the intestinal capillaries, yet the bile secretion does not rise in the least. (3.) We therefore believe that the effect of hepatic stimulants is to be assigned to a direct action of their molecules upon the hepatic cells or their nerves. The effect of physostigma and atropia rather points to an action on the latter, — in their instance, at all events, — as has been already indicated.[1] But we do not think it advisable at present to pursue this difficult subject, which, as far as we can see, is of little importance compared with knowing what does and does not stimulate the liver.

"It is particularly to be observed that all our experiments concern the influence of substances on the *bile-secreting* mechanism. The nature of our method has forbidden any observations on the *bile-expelling* mechanism. Seeing that the acid chyme, by irritating the duodenal mucous membrane, effects a reflex expulsion of bile, it may be that many substances which stimulate the duodenum have a similar effect. Yet we cannot but think that to bring about an *expulsion* of bile by muscular contraction of the gall-bladder and bile-ducts is, in all probability, a small thing compared with increasing the secretion of bile. One might expect that such powerful intestinal irritants as magnesium-sulphate and gamboge would be likely to bring about a reflex expulsion of bile; yet no one has attributed any cholagogue power to these. But, without attempting to reason out a question that can only be determined by experiment, we would merely add that we leave the investigation of the action of drugs on the *bile-expelling* mechanism to those who care to enter upon such an inquiry. We are satisfied to have shown that every substance supposed to be a cholagogue has, with the exception of calomel and manganese-sulphate, the power of exciting the *bile-secreting* mechanism; and, as our estimate of their powers, from an observation of the *bile secretion* only, closely agrees with observations on the human subject, where actions on the bile-secreting and on the bile-expelling mechanisms cannot be distinguished from one another,

[1] British Medical Journal, December 21, 1878.

we cannot but infer that surely their actions on the human subject must be chiefly on the bile-secreting mechanism. With regard to calomel we must refer the reader to our criticism of its action at the close of the second series of experiments,[1] and we have already commented upon manganese-sulphate.

"The term cholagogue is of necessity a vague one, and is applicable to any substance that increases the biliary flow, whether by augmenting the secretion of bile, or by exciting contraction in the gall-bladder and bile-ducts. We have therefore applied the more definite term *hepatic stimulant* to those substances which we have proved to increase the *secretion* of bile."

This long and able report concludes with a defensive argument in favor of the correctness of the mode of experimentation pursued by the committee, and strongly insists that the clinical experimentalist should try these drugs in man, and tell us whether or not he finds that they stimulate the human as well as the dog's liver, and also for what diseased states he finds the employment of this or that hepatic stimulant best adapted.

Belladonna in Intestinal Obstruction. — Drs. Kerr and May report[2] some very obstinate cases which other ordinary treatment had failed to relieve, but in which large doses of belladonna (one grain to two grains every hour) never failed of producing copious alvine evacuations, with relief to the tympanitis and vomiting, sometimes even when stercoraceous, accompanied by grave constitutional symptoms of collapse. A close examination of the reports of these cases certainly shows that all were of a desperate character of continued constipation. In one instance there had been no evacuation from the bowels for twelve days. Some of the patients were in imminent danger of death. One of these, an old man aged seventy years, who took six grains of the belladonna extract in seven hours, had dilatation of the pupil to the boundary of the arcus senilis, serious jactitation, and delirium, but in spite of these alarming symptoms rapidly recovered after several alvine discharges, and was out at his regular work in a fortnight. He had previously been subjected to the free opiate treatment, followed by castor-oil and warm enemata, with no relief, but rather an exaggeration of his symptoms. The abdomen was swollen and tympanitic, temperature 102° F., pulse 95; he had nausea, but no vomiting. In the evening there was increased rapidity of the pulse and general evidence of typhlitis; at this period the belladonna treatment was begun, and in twenty-four hours afterwards his convalescence was established. The relief in the other cases of colic was as remarkable.

Absorption and Elimination of Iron. — Hamburger,[3] experimenting on

[1] Journal, March 22, 1877.

[2] British Medical Journal, November 16, 1878, and August 31, 1879.

[3] Zeitschrift für phys. Chem. ii. 191, and Medical Times and Gazette, March 22, 1879.

excretion of iron, found that in the normal condition of dogs the amount which leaves the body in urine and fæces is almost identical with that given with the food, provided this quantity be comparatively small (150 to 176.5 milligrammes in thirteen days), but that if iron be given in excess (600 to 800 milligrammes during the same period), about 22 to 27 milligrammes are retained in the system; of 608.4 milligrammes excreted in thirteen days only 12 milligrammes passed out by the urine. It also appears that the excess of iron eliminated with the urine cannot be detected by the ordinary reagents, such as ammonium-sulphide. Hamburger believes that the iron in the fæces is partly excreted by the mucous surface of the bowel.

M. A. Luton[1] states that he has successfully introduced subcutaneously from five to twenty drops of solution of dialyzed iron without causing the slightest local disturbance. The immediate effects of this appear to be a sensation of warmth, as often agreeable as otherwise, spreading over the whole person, a determination of blood to the countenance, an increased mental activity, etc., etc. He calls this condition a sort of ferruginous intoxication (*ivresse ferrique*), of which the persistence is somewhat dependent upon the size of the dose injected. The appetite in these cases is diminished rather than improved, but instead of the constipation which usually follows the administration of iron by the mouth the bowels are pleasantly relaxed; also, the urine is deeper in color than that normally excreted, and yet its amount is not materially larger. He compares the effects of the hypodermic use of iron with that which follows the transfusion of blood, and states that they are similar. Finally, he says that any good pharmacist can prepare dialyzed iron, and he is not interested in paying tribute to any special manufacturer.

AMERICAN GYNÆCOLOGICAL SOCIETY: FOURTH ANNUAL MEETING.

The fourth annual meeting of the American Gynæcological Society was held in the hall of the Johns Hopkins University, in Baltimore, September 17, 18, and 19, 1879.

Wednesday, September 17th. The president, Dr. T. G. Thomas, called the meeting to order at 9.30 o'clock. The roll-call showed the following Fellows to be present: Fordyce Barker, R. Battey, G. H. Bixby, N. Bozeman, S. C. Busey, J. Byrne, J. R. Chadwick, T. M. Drysdale, A. Dunlap, G. J. Engelmann, H. J. Garrigues, W. Goodell, W. T. Howard, J. V. Ingham, J. T. Johnson, G. Kimball, W. T. Lusk, P. F. Mundé, T. Reamy, J. C. Reeve, W. L. Richardson, J. Marion Sims, A. D. Sinclair, J. C. Skene, A. H. Smith, I. E. Taylor, T. G. Thomas, J. D. Trask, E. Van de Warker, J. P. White, and H. P. C. Wilson, — thirty-one, and Dr. J. L. Atlee, an honorary Fellow.

[1] Mouvement médical, June 21, 1879.

A large number of prominent physicians who were present were made guests of the society.

Prof. W. T. Howard delivered an address of welcome to the city of Baltimore, and Professor Gilman, of the Johns Hopkins University, also welcomed the Fellows to that university, in which the meetings were to be held.

Dr. J. P. White read the first paper, taking for his subject Intra-Uterine Medication. The paper was strongly in favor of internal medication, and a variety of instruments applicable for such purposes were shown. Discussion on the paper was postponed until after the reading of the second paper, which was by Dr. Battey, on Intra-Uterine Medication by Iodized Phenol. This agent had been very extensively used by the writer, and always with great advantage. The strength of the application was to be graduated by the amount of the phenol used and the time it was allowed to be in contact with the diseased surface. No stenosis had ever been seen to follow its use.

A discussion followed, in which many of the Fellows participated. Dr. Sims believed there was a much shorter method of treatment, namely, that afforded by the use of the curette. He had recently seen several cases of cervical catarrh which had been cured by first dilating the cervix and then scraping away the fungoid granulations, and subsequently cauterizing the denuded surface with the actual cautery. — This method of treatment was also favored by Dr. Taylor, who, however, used instead of the actual cautery an iron only slightly heated and applied rapidly over the seat of the disease. — Dr. Howard thought that the great difficulty in treating cases of this kind was in not sufficiently making out a correct diagnosis of just what the trouble within the uterus is before beginning the treatment. It was especially necessary first to get rid of all uterine flexions. The use of strong acids or nitrate of silver was altogether too dangerous. — Dr. Barker had used cones of iodoform after first dilating the cervix with sea-tangle. — Dr. Byrne believed that a perfectly healthy uterus would not tolerate any liquid within its cavity. Nitrate of silver in solution or chloride of zinc he thought were most dangerous agents, and should never under any circumstances be applied within the uterus. The further the departure from a healthy uterus we are dealing with, the greater will the uterus tolerate internal medication. — Dr. Mundé had seen three serious attacks of colic follow the injection of a very small amount of fluid within the uterus. — Dr. Goodell believed that great care should be used in the introduction of sponge tents. He always preferred to accomplish what dilatation was needed with one introduction of the tents, and thought that the best results were attained by using a small sponge tent surrounded with one or more laminaria tents. He had used the phenol recommended by Dr. Battey, but in combination with hydrate of chloral. He also thought that the pain often experienced by women as the probe or sound passes the internal os is occasioned by the presence at that point of a fissure or tender cicatrix. Such cases are often cured by dilatation at that point. — Dr. Bozeman thought that more attention should be paid to the influence of uterine misplacement in producing or keeping up of uterine disease. — Dr. Reamy had entirely given up the use of sponge tents, using instead laminaria tents, which were far less likely to injure the mucous membrane. He believed that frequently the simple dilatation of

the cervix would effect a cure. — Dr. Thomas was, as a rule, entirely opposed to intra-uterine medication. He considered that such applications made within the os internum were very dangerous, as well as generally useless. There is usually some cause for the catarrhal condition, and it is not infrequently due to a flexion or misplacement. In cases where fungosities exist, the curette is of great value. In many cases a lacerated cervix is the cause of the difficulty, while in others there are constitutional causes to be removed. In cases of true idiopathic catarrh, which are always very rare, intra-uterine medication is of value. He believed that the pain experienced in some instances when the sound passes the internal os was due to a spasm, and not to the causes alluded to by Dr. Goodell.

Drs. Skene and Bozeman were appointed an auditing committee, and Drs. Barker, Taylor, and Richardson a committe on nomination.

Afternoon Session. The first paper, which was read by the secretary in the absence of the writer, Dr. Jenks, was on the Treatment of Puerperal Septicæmia by Intra-Uterine Injections. The discussion was postponed until after Dr. Chadwick had read a paper on Idiopathic Septicæmia in Gynæcological Practice, and Dr. Sinclair had reported a case of Puerperal Septicæmia.

These papers were all in favor of the use of intra-uterine injections as a powerful agent in the treatment of septicæmia arising either in gynæcological or obstetric practice. Dr. Chadwick especially favored the use of permanganate of potash, owing to the fact of its color serving as a guide to how long the injection should be continued, — a solution of it returning with a dirty yellow color so long as there remains behind any putrid matter to be washed out. — Dr. Sinclair alluded to the treatment of twenty-one cases by this method, of which twelve had recovered. — Dr. Skene thought that if more care were taken at the time of the delivery there would be less need of this kind of practice in the subsequent convalescence. — Dr. Engelmann had seen bad results follow the use of carbolic acid in these injections. — Dr. Barker believed that such practice was of value in a very small number of cases. He had seen death result from its use in five cases. — Dr. Howard believed thoroughly in the constant use of vaginal douches during convalescence, and that intra-uterine injections should be resorted to whenever there were the slightest symptoms of a septic absorption. — Dr. Goodell did not believe in this prophylactic method of treatment, which he considered more apt to do harm than good, but as a curative measure he believed it was invaluable. He thought that the cases which had been reported elsewhere as illustrative of the poisonous effect of carbolic acid were due to the fact that carbolic acid does not very easily dissolve in water. He therefore favored the use of the permanganate of potash; or if carbolic acid was used, it should be in a solution of glycerine. He also advised the thorough washing of the external genitals with a disinfectant after the delivery is effected. He would also recommend the delivery of the placenta with the woman on her back, as by so doing there was less likelihood of air entering the uterine sinuses. — Dr. Erick spoke highly of the use of suppositories of bromic acid in the vagina as a disinfectant. — Dr. Thomas believed strongly in the use of intra-uterine injections in these cases, combined with wet sheets so as to prevent the thermometer from rising over 100° F., and the use of quinine and stimulants.

THURSDAY, September 18th. The first paper was by Dr. Busey, and was entitled A Contribution to the Pathology of the Cicatrices of Pregnancy. He commenced with a review of the literature of the subject, in which is presented the views of Credé, Schultze, and Hecker, which relate especially to the value of these scar-like streaks and spots as a sign of existing or previous pregnancies. Then followed a discussion of the anatomy of the striæ and the nature of the lesion giving rise to these appearances. The investigations of Kustner, accompanied with photographic illustrations of sections of striæ prepared by him, were presented, together with original microscopical examinations of the normal integument and of the striæ. From comparison of these histological appearances, Dr. Busey reached the conclusion that the striæ are not caused by rupture of the Malpighian layer, as generally believed, nor by separation of the fibres of any of the layers of the skin. He then discussed the several methods of vesicle formations, and concluded that the striæ of pregnancy do not constitute any form or stage of vesiculation, but that the hydrophic condition, not infrequently observed, is to be ascribed to the transudation of fluid into the lymph spaces of the connective tissue. In conclusion, he maintained that the striæ of pregnancy are localized atrophies of all the constituent layers of the integument, with compression and partial obliteration of the lymph spaces. From a review of the clinical aspects of the several forms of striæ, he was forced to exclude distention as the only factor of causation, and to insist that their appearance is the result of the usual changes occurring during pregnancy, and their absence the expression of some special condition or peculiarity of organization which presents a successful resistance to the usual activities and changes incident to utero-gestation.

Dr. Mundé then read a paper on Prolapse of the Ovary, in which he gave a carefully prepared and exhaustive account of this affection, which heretofore has been so imperfectly described by medical writers.

At the conclusion of this paper, the president, Dr. Thomas, delivered the annual address, which was devoted to a consideration of the gynæcology of the future and its relations to surgery. It is impossible in the brief space allowed for this report to give even an abstract of this admirable address. It was a demand for the recognition from the general practitioner of what gynæcology and obstetrics had done, and an expression of belief that the future would still further demonstrate the important place to which gynæcological surgery was entitled as a special branch of surgery.

A vote of thanks to the president having been passed, the discussion began on Dr. Mundé's paper. Dr. Battey disagreed with the writer in some of his statements, and did not believe that a prolapse of the ovary should in any way be connected with the subsequent existence of a diseased condition of that organ. — The secretary read an account of a case sent by Dr. Spencer Wells, in which he had performed Battey's operation, removing both ovaries, with great relief to the patient. — Dr. Skene thought that stress enough had not been laid upon the value of the pain which persists for a long time after defæcation as a symptom of a prolapsed ovary.

AFTERNOON SESSION. Dr. Barker believed that constipation was a powerful agent, not only in causing this displacement, but also in keeping the organ

displaced. He believed that very little good was to be obtained from the use of pessaries for effecting a replacement of the ovary. — Dr. Busey believed that the structural changes observed in these cases were the result, and not the cause, of the displacements. — Dr. Chadwick had seen marked relief, in several cases, follow the use of hot rectal douches.

Dr. Byrne gave an account of a new method of performing the operation of kolpo-cystotomy by means of the galvano-cautery, and showed an instrument he had devised for holding the wall of the bladder in position while making the vesico-vaginal fistula. He claimed that the operation was to be performed as a curative measure in all serious cases of cystitis.

Dr. Sinclair read a paper on the measurements of the uterine cavity in childbed, and gave the measurements in one hundred and eight cases. The object of the reader was to present a series of figures of great value as bearing on the subject of involution following delivery. The average length of the uterine cavity in the one hundred and eight cases was 3.02 inches, the uterus in primiparæ averaging 2.94 inches and that of multiparæ 3.21 inches. The measurements were usually made during the third week.

Friday Morning, September 20th. The annual business meeting was held at nine o'clock, with closed doors. The report of the nominating committee was made, in which regret was expressed that Dr. T. G. Thomas had refused to allow his name to be used for a renomination. The following officers were elected: President, Dr. J. Marion Sims, New York. Vice-Presidents, Dr. W. T. Howard, Baltimore, and Dr. Robert Battey, Georgia. Council, Dr. W. Goodell, of Philadelphia, Dr. E. W. Jenks, of Chicago, Dr. A. D. Sinclair, of Boston, and Dr. A. J. C. Skene, of Brooklyn. Secretary, Dr. J. R. Chadwick, Boston. Treasurer, Dr. P. F. Mundé, of New York. The following were elected Fellows of the society: Dr. John Scott, of San Francisco, Dr. Edward L. Duer, of Philadelphia, Dr. R. Stansbury Sutton, of Pittsburgh, and Dr. J. W. Underhill, of Cincinnati.

It was voted that the next meeting of the society be held in Cincinnati, and the time was fixed for the first Wednesday in September.

The doors were then opened, and the reading and discussion of papers began with a paper by Dr. I. E. Taylor, on the Early Application of the Forceps in the First Stage of Natural Labor. In it the writer strongly advocated the application of the forceps within the uterine cavity whenever there were symptoms of an approaching tedious labor. — Dr. Howard believed that great advantage could be gained by the use of hot-water vaginal injection, and that when the os uteri was dilated so as to admit of version being performed that operation was preferable to the introduction of the forceps. — Dr. Reamy entirely dissented from the views held by Dr. Taylor.

Dr. Goodell read a paper based on clinical notes on the Hypertrophic Elongation of the Cervix Uteri, in which the writer favored, under certain circumstances, the amputation of the cervix with the actual cautery. — Drs. Reeve, Dunlap, Taylor, and Skene took part in the discussion, the last-named gentleman believing that oftentimes a great improvement followed a slight removal of the cervix, and thus the presence of a large granulating surface could be avoided.

Dr. Johnson read a paper on Mismanaged Labor as the Source of much

Gynecological Practice. The paper was a well prepared claim for a greater study of obstetrics as a means of avoiding the necessity of so much subsequent gynecological practice.

AFTERNOON SESSION. After the discussion of Dr. Johnson's paper, Dr. Reeve read the report of a Case of Extra-Uterine Pregnancy. After some further discussion and some farewell remarks of the retiring president, the society adjourned to meet at Cincinnati.

BRYANT'S SURGERY.[1]

IT is rare that a work undergoes so much alteration as this has done in passing from the first to the second edition, but this change represents that effected by three English editions. The chief value of this particular surgery lay originally in its very practical character, being largely a record of the author's experience, which in a hospital like Guy's was of course of just the character to illustrate a text-book. This feature has been preserved, while the arrangements of the subjects and the literary part of the work have undergone great improvements. There was room for it, but the want has been very satisfactorily filled. Another valuable feature is the beautiful illustrations, which are a model of what ought to be, but unfortunately rarely *is*, in every medical work. The author has evidently discarded the old pictures which have done duty for many generations, and has had an entirely new set made for his own special purposes, and they demonstrate with great clearness the points they are intended to show. These advantages make it valuable and interesting to the practitioner as well as the student.

DR. LUCAS-CHAMPIONNIÈRE ON TREPHINING.[2]

THE author of this very interesting little volume has undertaken to deduce practical surgical indications from physiological and pathological studies of the functions of the brain. It must, we think, be admitted that interesting as experiments on the localization of functions may be, they so far have been barren of results. They have led to many ingenious diagnoses, and autopsies have been doubly interesting, but it may be questioned whether the sick have been benefited. Dr. Lucas-Championnière has endeavored to show that motor symptoms following injuries to the brain may be faithful guides to the surgeon who would trephine if he knew where to do it. Most readers, we imagine, after finishing the preface, would be very skeptical, as we were, whether the author can give us the light he leads us to hope for; but we think many will admit that his facts and conclusions deserve very serious consideration. Dr. Lucas-Championnière is a strong believer in the trephine, which had at one time in France fallen into almost total disuse. He experiences difficulty in

[1] *A Manual for the Practice of Surgery.* By THOMAS BRYANT, F. R. C. S., Surgeon to and Lecturer in Surgery at Guy's Hospital, etc. Second American from the third revised and enlarged English edition. Philadelphia: Henry C. Lea. 1879.

[2] *La Trépanation guidé par les Localisations cérébrales.* Par le DR. JUST LUCAS-CHAMPIONNIERE. Paris: V. A. Delahaye et Cie. 1878.

giving rules for the propriety of the operation which shall apply to all cases, but he admits only one absolute contra-indication, namely, the fact of the skull's being so "smashed" that interference is necessarily useless.

The essential part of the work, however, is that relating to localization, especially of motion and of speech. The author places the latter function in Broca's celebrated convolution on the left, a conclusion which we have always thought hasty. He records a number of clinical observations, many of which are from the war of secession, showing the position of the motor centres. These are chiefly in the convolutions bounding the fissure of Rolando, which, following the author's nomenclature, we will call the ascending frontal and the ascending parietal convolutions. Dr. Lucas-Championnière recommends that the trephine be applied as follows, according to the paralysis: for paralysis of the leg, over the top of the ascending parietal; of the arm and leg, over the top of both convolutions; of the arm alone, over the middle of the ascending frontal; of the arm, with aphasia, over the lower third of the ascending frontal and the root of the third convolution; facial paralysis, over the lower third of the ascending frontal and the root of the second frontal; aphasia, over the root of the third frontal. It will be noticed that there is some vagueness in the latter cases, and it is of course possible that an effusion of blood may gravitate so as to give rise to symptoms indicating a region other than the one where the injury occurred. The author, however, is so convinced of the comparative harmlessness of the operation, especially with antiseptic precautions, that he advises the reapplication of the trephine (apparently again and again) should the search at first be unsuccessful. Directions are given for finding the fissure of Rolando, which, if the author's views come into vogue, will be an important point in topographical anatomy.

To conclude: while we cannot shake off a suspicion that the author is rather too much convinced of the accuracy of symptoms as guides to the locality of the injury, we congratulate him on opening a new and promising field of research. If other surgeons study the question as conscientiously as he has, we may hope that some parts of it, at least, will be definitely settled.

MEMORANDA ON POISONS.[1]

THESE memoranda were originally intended to refresh the memory of the practitioner on the subject of toxicology, and to show him at a glance the treatment to be adopted in any case of poisoning to which he might be called. The later editions have been enlarged somewhat by the editor, with the object of making it useful to the student as well as the physician. It is not a book, however, which we can recommend either as a text-book or book of reference. It treats the subject too briefly (necessarily in a book so small as this) to be of any value as a text-book, while its only claim to favorable mention as a book of reference depends upon its small size, on account of which one might perhaps expect to look up any desired information more readily than in the

[1] *Memoranda on Poisons.* By THOMAS HAWKES TANNER, M. D., F. L. S. Fourth American from the last London enlarged and revised edition. Philadelphia: Lindsay and Blakiston. 1879.

larger works on toxicology. But these latter are so well indexed, and treat of the various poisons so systematically and uniformly, that they can be consulted full as quickly, and much more satisfactorily, than a book like the present one.

THE EXPERIMENT AT ZURICH.

We print in another column a letter from Prof. Edmund Rose, of Zurich giving in a brief but succinct manner the present standing of the educational problem in that university. It has been obtained in answer to numerous communications we have received this summer upon this subject, and can be regarded as a fair statement of the case from a source which we have been told inclines favorably towards the aspirations of female students. Accompanying this communication are a number of graduation theses, of very excellent quality, and catalogues of the university for 1873 and 1879. In the former of these we find a list of eighty-eight female students, eighty of whom are Russians; in the latter there are but nine ladies' names, five of them being from this neighborhood, and one only of the remaining four being a native of Switzerland.

Although the statement made by the *Koelnische Zeitung* proves to have been incorrect, it reflects the impression received by the European press in consequence of recent action of the university, rendered necessary by complications arising from this attempt at coeducation. One could hardly ask for more satisfactory proof of the impropriety of such experiments than the experience of this school. Except in Russia, where other than professional influences appear to be at work, there is evidently no demand in Europe for female physicians. Taking the list of the present year as a sample, it is evident that the question is connected, not with professional wants, but with the present movement favoring the general advancement of the female sex, that country most intimately connected with the cause representing the majority of students. As six years ago it was the nihilists, so at the present time the "advanced thinkers" have their delegation; at still another period it was the "German noblemen."

In view of these experiences we can scarcely believe that Harvard will be persuaded to make a similar experiment. We have already attempted to show that opportunities for all earnest young women who wish to gain their living by the practice of medicine are amply provided. The opening of a school at Harvard would of necessity be followed by a collapse of one or more of the schools for women; and in fact we have been informed that this is precisely what has been contemplated, — that the New York school would close its doors on the day that permission is given to women to study at Harvard. It is not, then, to "supply a want" that this university is asked to admit the other sex. Indeed, unless some such arrangement as the one suggested were made, the facilities for study would become as dangerously great as they are now for men.

Let the ladies by all means stick to their own schools; let them show a capacity for teaching as well as learning, for building up a medical community

by their own exertions without unusual or extraneous support. In any such effort we should have an experiment of reliable and permanent value which would settle the question definitely, and one which would win the cordial approval of even the most skeptical.

MEDICAL NOTES.

— The New Hampshire Medical Society held its eighth semi-annual meeting at Hanover on September 17th and 18th. The members were welcomed by Professor Frost, of the New Hampshire Medical College. Professor Hubbard read a paper upon the Life and Character of Dr. Nathan Smith. Professor Dunster gave a lecture upon the Discovery of Anæsthesia, and Professor Home gave a fine exhibition of microscopical preparations. In the evening there were receptions at the houses of Mrs. Dixi Crosby, Mrs. A. B. Crosby, and Professor Frost.

— There has been much agitation in this city recently of the question of intramural burials. The board of health advise that no further interments be permitted in any of the old grounds of the city. This is opposed by the few remaining members of certain families owning tombs in these cemeteries, and by that portion of the public who see in this the first step towards utilizing the grounds for building purposes. The number of annual burials is so exceedingly small, and has been for so many years, that we can see no harm in allowing the present law to stand as it is. A residence of nearly twenty years in a house adjoining one of these grounds, the bedroom window actually opening on to it, has convinced us that the sanitary advantages of these old air spaces far outweigh any theoretical dangers arising from crumbling vaults. During all this period we hardly remember to have seen more than one or two funerals. The few who wish to be laid beside their relatives should be allowed to depart in peace.

— At a post-mortem examination in a lunatic asylum in Saxony a needle was found imbedded in the heart. It had passed through the posterior wall of the left ventricle. The patient, a man of twenty-five, had died of peritonitis. Previous to his last illness he had always felt well, and never complained of any cardiac trouble. How the needle entered his heart was undiscovered.

— A woman, wife of a laborer at Kettwig, Germany, recently gave birth to *five* children — four boys and a girl — at one birth. Although very small they were well formed, but lived only a few hours. The mother made a good recovery.

— The new catalogue of the library of the Faculty of Medicine in Paris has been recently completed, and the books have been arranged in order on the shelves. The library contains from 55,000 to 59,000 volumes, more than 20,000 of which had been lying, covered with dust, in obscure places.

— Sir Thomas Maclean, F. R. S., long known as the astronomer royal, recently died at the Cape of Good Hope. He was formerly a physician, but abandoned the profession in order to make important astronomical investigations in Southern Africa. He consequently was soon after appointed astronomer royal.

— A faculty of medicine in connection with the Neva University, Russia, is to be established at Odessa.

— The following is Dr. Kerr's formula for a preparation of red cinchona, which he recommends as of great service in dipsomania: "Add one ounce of the powdered bark to one pint of water, acidulated with one hundred minims of dilute hydrochloric acid. Boil for ten minutes, and strain when cold. Pour water over the contents of the strainer until the product measures one pint. Dose, two ounces every three hours, gradually lessening quantity and frequency of the dose after the first day, until in seven days it is reduced to a teaspoonful three times daily. The most reliable temporary alleviation of the craving for alcohol that Dr. Kerr has ever witnessed followed the use of a full emetic dose of ipecacuanha.

— Dr. Braun, of Vienna, has successfully used the muriate of pilocarpine in eclampsia. Dose, three centigrammes administered hypodermically.

— Sir William Jenner has been forced by an attack of whooping-cough to abandon his practice and leave London. He did so in order that he might not spread the disease.

NEW YORK.

— The fourth annual meeting of the American Academy of Medicine was held at the building of the New York Academy of Medicine on Tuesday and Wednesday, September 16th and 17th. On the evening of the 16th a large audience assembled to hear the address of the president, Louis H. Steiner, A. M., M. D., of Frederick, Maryland, who had selected as his subject The Preparatory Education most needed by the Medical Student. This was an admirable effort, characterized by clearness and elegance of diction, and in it he made a strong and eloquent plea for the necessity of a thorough academic education as the only sure foundation on which to build. Believing the ancient classics to furnish the best possible training that could be given the youthful mind, he decried the substitution of other studies for these, while at the same time he urged the importance of logic and rhetoric in preparing the student to make sound deductions from his observations, and express his opinions in the clearest and most attractive manner. Therefore, the best preparatory education for the medical student was the regular old college curriculum; and a great part of the address was devoted to showing from various standpoints why this was the case. The fact, said he, that so many hundreds of students were admitted to the medical colleges without the slightest attention being paid to their previous training should be a source of great regret to the profession, since the evil effects of such a system were only too apparent. Young men who could not even speak or write the English language correctly were received as matriculants in the schools, rushed through the course at railroad speed, and then permitted to appear with their degree of M. D., and claim the right to equality with the most experienced and learned members of the profession. Since ancient times theology, law, and medicine had been considered the three strictly learned professions, and it was entirely wrong that that of medicine should be degraded by a system which permits untrained men to gain so easy access to its ranks. Probably the only remedy for it was to create a strong public opinion against it, which should make

young men ashamed to present themselves as candidates for admission to the profession until they had received the requisite preliminary education. They ought to be made to understand that it would be impossible for them to gain honorable distinction as physicians unless they had first laid such a foundation for their future career, because the successful practitioner of the present age required something more than a superficial knowledge of medicine and surgery. The object of military and naval academies was not merely to teach tactics and the other details of the art of warfare, but also to develop analytical minds, so that when a commander found himself in any difficult emergency he could forget books and professors, and make and execute his own plans instantly upon the spot. So the practicing physician often found himself face to face with serious and unexpected complications, and unless his mind had received the proper scholastic training he would be very likely to fail in devising such measures as would render him master of the situation.

It will, perhaps, be remembered that the American Academy of Medicine was organized at Philadelphia in 1876, at the time of the meeting of the International Medical Congress there, and that the venerable Dr. Traill Green, of Eastern Pennsylvania, was its first president. His successor was Prof. Frank H. Hamilton, of New York, whose term expired last year, when Dr. Steiner was elected. The secretary of the Academy is Dr. Richard J. Dunglison, of Philadelphia.

— The alterations in the building of the New York Academy of Medicine, which give it, among other improvements, a large, commodious, and well-ventilated hall for meetings, are now completed, but the formal opening has not yet taken place.

— At the recent meeting of the Social Science Association at Saratoga, President Barnard, of Columbia College, offered resolutions in favor of the adoption in the United States of the metric system of weights and measures, and among the papers read were one on Sewerage in Small Towns, by George E. Waring, Jr., and one on the Tenement-Houses of New York, by Dr. Charles P. Russell, formerly of the Metropolitan Board of Health.

— Some little excitement was lately occasioned in a remote portion of Jersey City by the reported occurrence of two or three cases of "spotted fever," but the health authorities expressed the opinion that the patients were really suffering from typho-malarial fever.

— Ever since last winter, at the time there were such exaggerated reports about the disease, pleuro-pneumonia has prevailed to a small extent among the cows of the stables in New York, but General Patrick, the state commissioner, Professor Law, and the veterinary surgeon, Dr. James Hopkins, have kept a constant supervision over the stables, and have prevented the further spread of the disease by promptly killing all infected animals. Of late there has been a slight increase in the number of diseased cows discovered. Previous to last month three or four of them were killed every week, but during the last few weeks about half a dozen have been dispatched each week at the offal dock of the health department on the North River. The work of General Patrick and his associates has been of much importance to the public in insuring, to a certain extent at least, a supply of good milk, while the knowl-

edge gained from many autopsies which have been made, and the prolonged study of the disease by the city health officers and other medical men of New York, have led to the discovery of valuable information, which can probably be used to great advantage hereafter in dealing with the disease. Dr. Day, the sanitary superintendent, who has taken great interest in the work, states that there is no cause to fear a spread of the affection, since the comparatively few sick cows found have been scattered about the city, so that the disease is not sufficiently concentrated in any one spot where it could find a chance to develop rapidly.

ST. LOUIS.

— The yellow fever outlook in St. Louis remains unchanged, occasional cases occurring among those coming from the South, which are sent to Quarantine Hospital; at present there are four cases of yellow fever there.

— In Memphis they are making great efforts to disinfect. Privy vaults are being covered with lime preparatory to emptying them and filling them with earth when cold weather sets in. Some two hundred barrels of lime and five thousand gallons of a solution of copperas are used daily by the Tennessee State Board of Health. Nurses when sent out are furnished with a package of sulphate of copper and a package of sulphate of zinc. The discharges of the patient are disinfected with the first, and when death occurs the bodies are immediately washed with a solution of the second, wrapped in a sheet saturated with this solution, and buried.

— At the suggestion of the State Board of Health they are about to place a cordon of mounted men about Memphis, to prevent all egress or ingress of those not furnished with passes.

— Assistant Surgeon L. J. Draper, of the United States navy, who was sent to St. Louis by the government to examine boys applying for the navy, died in that city August 30th, after a brief illness, attended by Dr. Green, United States navy, and Dr. Prewitt of St. Louis. The history pointed to a peritonitis some two years ago, since which time he had never been free from colicky pains. The early part of his illness was marked by constipation. A stomach tube was introduced through the rectum, and injections were given resulting in slight passages, and he was thought to be improving; but upon the 28th of August bloody stools were passed, and the diagnosis of stricture of the small intestines was made. The intestines in the umbilical and hypogastric regions could be plainly felt. Upon post-mortem examination traces of an old peritonitis were found; the viscera were matted together, especially the small intestines, and about the junction of the ileum and jejunum an inflammatory band had formed constricting the gut, and was probably the chief cause of death, although the matting together of the bowels must have seriously interfered with peristaltic action, and thus would have produced chronic constipation.

Dr. Draper's place has been filled by Dr. Green, of the United States navy. Dr. Green does not find much difference between the applicants here and on the coast. There is a larger percentage accepted among boys coming from the country than among those from the cities. Here two out of three have been rejected. Among the most frequent causes of rejection were varicocele and insufficient development.

PROFESSOR ROSE AND ZURICH FEMALE STUDENTS.[1]

DEAR SIR, — In answer to the questions in your letter, I must state that Miss Smith, of America, has been my sub-assistant during the past summer (1879), and that the story told in the published letter (in the *Boston Daily Advertiser*) is passably correct.

We have always female students, but those from Russia have nearly all disappeared since the well-known ukase, much to our satisfaction; as their number was very large we do not consider it a misfortune.

The communication in the *Koelnische Zeitung* is based probably on the fact that at first only very earnest and industrious ladies entered, but later many coquettish and hysterical ones, who have caused a strong prejudice against the whole question. At present the female students, and especially Miss Smith, are again much more industrious and earnest in their studies, — quite as much so as are the male students. After all that has happened they are allowed to continue here, and, as expected, after twelve years' trial, they do not cause any great excitement. Two of our female students, having passed the examinations here, practice in Zurich, two others in Berlin, one in London, one in St. Petersburg, etc., all with success.

The Russian ladies were doubtless intimately connected with the nihilists, and the action of the Russian government is therefore easily understood. The number of students of the university here has grown very large, because every foreigner formerly was admitted without any examination. The fact that, for instance, several mistresses of German noblemen tried to be admitted induced the government, in accordance with a proposition made by the senate, to pass an order making a *testimonium morum* requisite for the admission of a lady student, and also the proof of a certain standard of education. We are, therefore, now able to prevent similar occurrences. There have been no disturbances between male and female students, but several marriages (two or three). The official papers which I send will enable you to understand better the state of the question. Yours truly, EDMUND ROSE.

ZURICH, *August* 17, 1879.

SHORT COMMUNICATIONS.

PSEUDO-HYPERTROPHIC PARALYSIS.

BY S. G. WEBBER, M. D.

IN the number for September 11th "Enquirer" asks, "What is the pathology of the above-named disease?"

In the JOURNAL for November 17, 1870, I gave, in tabular form, a summary of all the cases of which I could at that time find record, numbering forty-one. I have now the references to thirty-five or forty authors who have since that date reported from one to four or five cases each, a total of about one hundred and fifty cases. I have also since then seen three undoubted cases of the disease: two were sisters, and one case in which there might be a doubt as to the diagnosis.

Almost without exception the disease begins in early life, before eight years of age, generally as early as three, sometimes before the second year. First there is weakness; then

[1] Written to a friend in this city.

the calves increase in size, sometimes the peronei and tibial muscles; occasionally a few of the muscles moving the thigh on the pelvis or those of the shoulder are enlarged. As the child grows older certain muscles, especially those of the upper extremities, are affected with atrophy. There are pauses in the progress of the disease, but a cure is not to be expected. In a few cases a fall has preceded the development of the symptoms, or there has been an acute febrile attack, such as measles, but in most cases there is no history of a previous injury or disease. It might be questioned whether these accidents have really been the cause of the affections.

The disease is of long duration; the patients see many physicians, at last are given up as hopeless cases, and die of some intercurrent affection. Autopsies are rare. With two exceptions the results of autopsies have been uniformly to show changes in muscular tissue, and no primary changes in the spinal cord or nerves. The changes in the muscles consist in an increase of interstitial tissue and fat among the muscular fibres, pressing them apart; a diminution in the size of the individual fibres, the striæ being retained, but becoming finer as the size of the fibres decrease; in extreme cases a diminution in the number of the fibres; no fatty degeneration of the fibres, as is seen in progressive muscular atrophy. Very rarely there have been found hypertrophied muscular fibres. These changes have been seen not only in fatal cases, but in others, when portions of the muscles have been removed by a harpoon.

In the cord, Brieger[1] observed no change. N. H. Bay[2] found a slight amount of sclerosis of the lateral columns, which was thought to be secondary. Cohnheim found no change in the cord. Charcot in two cases[3] found no change in the cord. Gowers and Clarke[4] found granular degeneration around the blood-vessels, the nerve cells being entirely healthy. These changes Gowers[5] thinks are secondary, and due to disturbances of the system which arise shortly before death.

Of the two exceptions above referred to, one is by Barth.[6] The nerve cells of the anterior cornua were affected. This case was that of an adult, and the date at which it began, the course of the disease, the aggregation of symptoms, and the morbid changes all concur in raising a question as to its identity with the disease under consideration. The second is a case by Müller.[7] There was a fall at four years of age. The account does not state when the weakness was noticed. There were club-feet; one leg was smaller than natural, the other larger. The patient, a girl, at the time of observation was insane, and remained so till death, the insanity being rather of the nature of general paralysis. It is impossible to distinguish whether the changes in the cord belonged to the muscular hypertrophy or to the general affection of the nervous system. The case was clearly complicated and exceptional.

The weight of evidence so far is opposed to the spinal origin of the disease; the only change which has been found constantly is muscular. Gowers[8] suggests that the affection may be due to a congenital error of development, in consequence of which the muscles are affected at the time when the earliest strain is put upon them.[9]

The case reported so briefly in this journal for August 21st is not a typical case of the disease; every particular given differs from what is usually found. The case began at eleven years, much later than usual. There is complete paralysis of the legs after three years, which has not occurred so soon in cases beginning late in early childhood. The muscles of the thighs are affected. The calves are almost invariably the first to enlarge.

[1] Archiv für klin. Med., 1878, page 200.

[2] Hospitals Tiedende, 1877.

[3] Arch. de Physiol., iv., 1871. Leçons sur les Maladies du Système nerveux, t. ii., 1877.

[4] Med. Chir. Transactions, vol. lvii., page 247.

[5] Lancet, July, 1879.

[6] Arch. d. Heilkunde, xii., 1871, page 121.

[7] Beiträge zur pathologische Anat. und Physiol. des mensch. Rückenmarks, 1871.

[8] Lancet, July, 1879.

[9] If "Enquirer" can conveniently refer to the London Lancet for July, he will find the paper by W. R. Gowers well worth reading.

COMPOUND DISLOCATION OF RIGHT ANKLE-JOINT.

BY THOMAS HENDERSON, M. D., LAKE FOREST, ILL.

Joseph O'K., while riding behind a horse that became unmanageable, the evening of March 11, 1879, jumped from the wagon, and sustained a compound dislocation of the right ankle-joint. The flesh over the joint was lacerated two and a half inches, and the entire end of the tibia protruded through the wound. There was also partial dislocation of the scaphoid and cuboid bones of the same foot.

He was placed under the influence of chloroform, and the wound dressed with warm water. No disinfectants were used, and the dislocation was reduced. The limb was bound up in a thick wadding of cotton and splints, and he returned home, a distance of one and a half miles, over a rough road, where the temporary dressings were removed. A splint on the outer side of leg and cold-water dressings were then applied.

The day following antiseptic dressings were commenced. The wound was dressed every third day for four weeks, the patient being anæsthetized each time. With the exception of an abscess forming and opening spontaneously on the outside of the leg just about the ankle-joint, the wound progressed favorably under the following treatment: Splints on outside of leg and foot, and carbolic-acid dressings, except a few days, when flaxseed poultices were applied to encourage granulations. With the exception of a very few doses of morphine to obtain sleep, no drugs whatever were taken. There were only a few days that the temperature or pulse was above the normal stardard; consequently at no time was his life compromised. There is at this writing, September 10th, a small opening over the joint and a slight discharge, which is steadily and gradually decreasing in quantity. The joint is firmly anchylosed, with the toes pointing slightly downwards. No necrosis can be discovered in or about the joint. The patient was confined to his bed ninety-six days. Since then he has been about on his crutches, and thinks he can bear two thirds of his weight — one hundred and sixty pounds — on the injured foot. Dr. Bond, of Libertyville, whose counsel and advice were of much value, occasionally saw the patient. I have ventured to report this case as furnishing proof that it is not always necessary to amputate or excise in compound dislocations of ankle-joints, as recommended by the majority of surgeons, from Hippocrates down to modern authors.

THE SECRETARY OF WAR'S OPINION ON DR. HAMMOND'S CASE.

In March last, an act of Congress was passed for the relief of Dr. W. A. Hammond, late surgeon-general of the army, and upon recommendation of the secretary of war the findings and sentence of the general court-martial promulgated in 1864 have been annulled and set aside by the president, and Dr. Hammond is placed on the retired list of the army as surgeon-general without back, present, or future pay or allowance of any kind whatsoever, The following is the opinion of the secretary of war referred to in the foregoing order. After reciting the law as above, and giving a synopsis of the charges upon which Surgeon-General Hammond was tried, the secretary continues in his report to the president: —

I have the honor to submit my conclusions upon the case, as follows: —

First. In construing the act of Congress of April 16, 1862, as not depriving the surgeon-general of the power to purchase medical supplies, Dr. Hammond was guilty of no crime. The construction he placed upon that act, whether erroneous or not, was entirely consonant with an honest purpose, and such a purpose must be presumed until the contrary appears. The act authorized medical purveyors to purchase all medical supplies under the direction of the surgeon-general. The surgeon-general held that the power to make purchases in person, which had been previously exercised by him and by his predecessor, was not taken away by this act; that the purveyors were placed under his orders for the purpose of aiding him in the performance of that duty, rendered very onerous at that time by a great war. He held that what he could command another to do he could do himself; that what he could do indirectly he could do directly. I am clearly of the opinion that the construction of the act was not so palpably wrong as to render all acts done in performance of it presumably criminal. It was the duty of the surgeon-general to construe and execute the act.

Second. The acts of the surgeon-general in making purchases of medical supplies in person and not through a medical purveyor, and in directing purveyors to purchase particular articles at specified prices from certain persons, were not acts in themselves criminal. The mere fact that these things were done did not raise a presumption of guilt to be overthrown by the accused. The burden was upon the prosecution to establish, by competent evidence and beyond a reasonable doubt, that the acts complained of were done with corrupt intent.

Third. Upon the question of intent the board recently convened finds that there is no evidence that the surgeon-general was interested in or profited by the contracts which were charged as fraudulent. It is further found by the board that there is no direct evidence to establish corruption, and that the circumstantial evidence upon the question of intent is conflicting and some of it incomplete. But the board sustains the sentence of the court-martial largely upon the ground that the acts complained of were unlawful in themselves, and that therefore a fraudulent intent must be presumed until the contrary is established by the accused, the burden being on him. This I regard as a grave error, for the reasons already stated.

Fourth. In my opinion the evidence does not establish the charge of corruption, and it is only by assuming that the acts complained of were in themselves so palpably unlawful as to raise the presumption of criminal intent that any sufficient foundation for the sentence of the court-martial can be found, and that assumption not being warranted by the terms of the statute, the finding cannot be upheld.

Fifth. The charge of falsehood is not sustained. Dr. Hammond stated in a private letter to Dr. Cooper that General Halleck had requested the detail of Surgeon Murray for duty at Philadelphia. It was charged that General Halleck had not made this identical request, but it was admitted that he had requested the transfer of Dr. Murray from the South to Eastern hospital duty. It was in proof that Dr. Murray had urgently requested General Halleck to secure his transfer to Philadelphia, and it is not improbable that this was mentioned by General Halleck to Dr. Hammond, as the latter claims. General Halleck testified that he had no recollection of having mentioned Philadelphia as the place to which he desired to have Dr. Murray sent. There is room for doubt as to what the surgeon-general understood the request of General Halleck to be. There is still greater room for the conclusion that an honest misunderstanding arose between the two, and I cannot but regard it as a very harsh and unjust judgment which pronounced the surgeon-general guilty upon this charge.

I recommend that the finding and sentence in the case of Surgeon-General William A. Hammond, referred to, be annulled and set aside, and that the name of said William A. Hammond be placed on the retired list of the army as surgeon-general, without back, present, or future pay, or allowances of any kind whatsoever.

GEORGE W. MCCRARY, Secretary of War.

THE METRIC SYSTEM IN MEDICINE.

OLD STYLE.	METRIC. Gms.
♏i. or gr. i. equals	.06
ƒ℥i. or ℥i. equals	4
ƒ℥i. or ℥i. equals	32

The decimal *line* instead of *points* makes errors impossible.

As .06 (Drug) is less than a grain, while 4. and 32. (Vehicle) are more than the drachm and ounce, there is no danger of giving too large doses of strong drugs.

C. C. used for Gms. causes an error of 5 per cent. [excess].

A teaspoon is 5 Gms.; a tablespoon, 20 Gms.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM SEPTEMBER 12, 1879, TO SEPTEMBER 19, 1879.

ADAIR, GEORGE W., lieutenant and assistant surgeon. Assigned to duty as post surgeon, Fort Mackinac, Michigan. S. O. 161, Department of the East, September 13, 1879.

MIDDLETON, P., captain and assistant surgeon. Relieved from duty in the Department of the East, to take effect October 1, 1879, and to report to the commanding general, Department of Texas, for assignment to duty. S. O. 215, C. S. A. G. O., September 17, 1879.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 13, 1879.

Cities.	Population estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhœal Diseases.	Diphtheria and Croup.	Pneumonia.	Typhoid Fever
New York	1,085,000	542	26.09	32.41	19.89	3.32	4.97	0.92
Philadelphia	901,380	232	13.42	12.93	7.33	.43	2.59	3.45
Brooklyn	564,400	246	22.73	25.20	14.23	6.09	4.88	0.81
Chicago	—	170	—	34.12	12.35	11.77	2.35	2.94
St. Louis	—	105	—	25.71	13.33	4.76	4.76	1.90
Baltimore	365,000	143	20.43	31.47	11.19	4.19	1.39	4.90
Boston	360,000	136	19.69	37.50	28.68	2.94	1.47	3.67
Cincinnati	280,000	86	16.01	34.88	16.28	4.65	5.81	2.33
New Orleans	210,000	70	17.38	11.43	8.57	—	2.86	—
District of Columbia	170,000	82	25.15	21.95	17.07	—	4.88	2.44
Cleveland	160,000	38	12.39	42.11	21.05	5.26	2.63	5.26
Pittsburgh	—	54	—	46.30	14.81	14.81	1.85	3.70
Buffalo	—	—	—	—	—	—	—	—
Milwaukee	127,000	52	21.35	30.77	13.46	11.54	1.92	—
Providence	101,500	34	17.47	23.53	11.76	2.94	—	—
New Haven	60,000	17	14.77	23.53	5.88	5.88	—	—
Charleston	57,000	34	31.10	14.71	11.76	—	2.94	2.94
Nashville	27,000	13	25.11	15.38	9.69	—	—	7.69
Lowell	53,300	14	13.69	35.71	28.56	7.14	—	—
Worcester	52,500	17	16.88	29.53	23.52	—	—	5.88
Cambridge	50,000	15	15.64	46.66	33.33	13.33	—	—
Fall River	48,500	21	22.57	57.14	28.57	—	—	4.76
Lawrence	38,200	15	20.47	26.66	13.33	13.33	—	—
Lynn	34,000	9	13.81	22.22	22.22	—	—	—
Springfield	31,500	14	23.17	14.28	7.14	7.14	7.14	—
New Bedford	27,000	9	15.58	44.44	22.22	—	11.11	11.11
Salem	26,400	6	11.85	33.33	33.33	—	—	—
Somerville	23,350	3	6.70	33.33	—	—	—	33.33
Chelsea	20,800	4	10.03	—	—	—	—	—
Taunton	20,200	7	18.07	—	—	—	—	—
Holyoke	18,200	6	17.19	16.66	—	—	—	—
Gloucester	17,700	5	15.24	20.00	—	—	—	—
Newton	17,100	—	—	—	—	—	—	—
Haverhill	15,300	13	44.30	30.77	15.38	7.69	—	—
Newburyport	13,500	3	11.59	—	—	—	—	—
Pittsfield	12,650	—	—	—	—	—	—	—
Fitchburg	12,500	5	20.85	20.00	20.00	—	—	—
Milford	9,800	3	15.96	—	—	—	—	—

Two thousand two hundred and twenty-four deaths were reported: principal "zymotic" diseases 632, diarrhœal diseases 348, consumption 336, diphtheria and croup 98, pneumonia 76, scarlet fever 59, typhoid fever 49, bronchitis 37, malarial fevers 31, whooping-cough 30, measles nine, erysipelas five, cerebro-spinal meningitis four, small-pox none. From *scarlet fever*, New York 12, Baltimore and Cincinnati seven, Brooklyn and Chicago six, Pittsburgh and Fall River five, Providence three, Philadelphia and Boston two, District of Columbia, Cleveland, Holyoke, and Gloucester one. *Malarial fevers*, New York 16, St. Louis five, Baltimore three, New Orleans, Milwaukee, and New Haven two, Charleston one. *Whooping-cough*, New York eight, Baltimore five, Brooklyn four, Philadelphia, Chicago,

Cincinnati, and Pittsburgh two, St. Louis, Boston, District of Columbia, Cleveland, and Milwaukee one. *Measles*, New York six, Chicago, Baltimore, and Cleveland one. *Erysipelas*, Chicago two, New York, Cincinnati, and Cleveland one. *Cerebro-spinal meningitis*, New York two, Chicago and New Bedford one. There is a still further reduction, this week, in the mortality from diarrhœal diseases, with an increase from consumption, pneumonia, diphtheria and croup, scarlet fever and measles. In 19 cities and towns of Massachusetts, with an estimated population of 872,150, scarlet fever and typhoid fever were increasing.

The meteorological record for the week in Boston was as follows: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in inches.
Sept. 7	30.086	66	74	59	88	80	95	87	SW	SW	S	3	10	11	F	R	F	.2	—
" 8	29.789	68	78	61	100	64	84	82	S	SW	W	12	12	8	O	F	F	7.3	.40
" 9	29.994	60	69	52	81	50	77	69	W	NW	W	9	12	5	C	F	C	—	—
" 10	30.260	63	72	55	43	55	74	57	NW	E	SW	7	7	2	F	F	O	—	—
" 11	30.337	60	67	52	80	64	77	73	N	E	SE	4	5	3	H	F	C	—	—
" 12	30.214	60	75	52	81	60	59	66	0	SE	SW	0	11	8	H	F	C	—	—
" 13	30.098	62	72	51	76	39	88	67	SW	S	SW	4	14	7	F	F	C	1.7	.02
Week.	30.108	63	72	54				72		SW		1213 miles.						9.2	.42

[1] O., cloudy; C., clear; F, fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

The cases of yellow fever reported in Memphis for the week ending September 20th declined to 80 and the deaths to 25.

For the week ending August 23d, in 149 German cities, with an estimated population of 7,555,488, the death-rate was 27.6 against 27.2 of the previous week. Diphtheria was about the same, diarrhœa less prevalent, and the other infectious diseases more so. Four thousand and seventeen deaths were reported: diarrhœal diseases 869, consumption 451, lung diseases 219, diphtheria and croup 97, whooping-cough 60, typhoid fever 59, scarlet fever 56, measles 37, puerperal fever 13, small-pox two. The death-rates ranged from 13.8 in Lubeck to 40.8 in Chemnitz; Munich 35.3; Dresden 29.0; Berlin 30.3; Hamburg 27.0; Hanover 22.8; Cologne 23.8; Frankfort 22.3. Also for the same week, Vienna 23.4; Paris 21.8.

For the week ending August 30th, in the 20 English cities and towns, with a population estimated at 7,383,999, the death-rate was 19.3 against 18.1 of the previous week. Two thousand seven hundred and thirty-one deaths were reported: diarrhœa 343, lung diseases 149, scarlet fever 109, whooping-cough 78, measles 62, fever 34, diphtheria 21, small-pox (London) seven. The death-rates ranged from 11.1 in Portsmouth to 22.9 in Manchester and Leeds; London 20.0; Bristol 17.4; Birmingham 17.5; Liverpool 21.6. In 28 Belgian cities and towns of 10,000 population and over, the death-rate was 18.9; in 24 of less size, 22.5, — diarrhœa, typhoid fever, whooping-cough, and measles continuing very prevalent, as was small-pox to a less extent; one death was reported from diphtheria, and none from scarlet fever; Brussels 22.8; Antwerp 23.6; Ghent 29.6; Liege 21.2. In 19 prominent Swiss towns, small-pox and whooping-cough were most prevalent of the infectious diseases, the others being quite rare.

BOOKS AND PAMPHLETS RECEIVED. — Vegetarianism. The Radical Cure for Intemperance. By Harriet P. Fowler. New York: M. L. Holbrook & Co. 1879.

Emotional Prodigality. By C. Fayette Taylor, M. D. (Dental Cosmos, July, 1879.)

American Health Primers. Eyesight and How to Care for It. By George C. Harlan, M. D. Philadelphia: Lindsay and Blakiston. 1879. (For sale by A. Williams & Co.)

The French Exhibition of Horrors. A Sermon on the Sin of Torturing Animals. By Rev. John Moffatt, Minister of the Scotch Kirk, Bayfield, Canada. Toronto. 1879.

On the Connection of the Hepatic Functions with Uterine Hyperæmias, Fluxions, Congestions, and Inflammations. By L. F. Warner, M. D. (Reprint from the Transactions of the American Medical Association.) 1879.

Transactions of the Minnesota State Medical Society. 1879.

Transactions of the Medical Association of Georgia. 1879.

Transactions of the Medical Society of the State of New York for the Year 1879. Syracuse, N. Y.

Report of the Board of Health of the City and Port of Philadelphia for the year 1876.

The Ampulla of Vater and the Pancreatic Ducts in the Domestic Cat. By Simon H. Gage, B. S. New York. 1879.

The Heart and its Diseases, with their Treatment, including the Gouty Heart. By J. Milner Fothergill, M. D., etc., etc. Second Edition, with Additions. Philadelphia: Lindsay and Blakiston. 1879. (From A. Williams & Co.)

Student's Guide to the Diseases of Women. By A. L. Galabin, M. A., M. D., F. R. C. P., etc., etc. Philadelphia: Lindsay and Blakiston. 1879. (From A. Williams & Co.)

Transactions of the Thirty-Fourth Annual Meeting of the Ohio State Medical Society. Columbus, O.: Cott and Hann. 1879.

Santa Cruz for Homes. The Climate, Botany, Geology, and Health of Santa Cruz and Vicinity. By C. L. Anderson, M. D. San Francisco: Wallace W. Elliott & Co.

Eyeball Tension: Its Effect on the Sight and its Treatment. By W. Spencer Watson, F. R. C. S. Eng., B. M. Lond., etc., etc. London: H. K. Lewis, 136 Gower Street. 1879.

Fifteenth Report of the Trustees of the City Hospital, Boston, with Reports of the Superintendent and Professional Staff, etc. Boston: Rockwell and Churchill. 1879.

Report on Hog Cholera. By D. N. Kinsman, M. D., Columbus. (Read before the Ohio State Medical Society, June 3, 1879.)

Dermatitis Venenata, or Rhus Toxicodendron and its Action. By Roswell Park, A. M., M. D. (Archives of Dermatology, July, 1879.)

Medical and Surgical History of the War of the Rebellion. Part II. Medical Volume. Surgeon-General's Office. Washington: Government Printing Office.

Richet's Histology and Physiology of the Cerebral Convolutions. Also Poisons of the Intellect. Translated by Edward P. Fowler, M. D. New York: William Wood & Co. 1879. (Frank Rivers, 28 School Street, Boston.)

The National Dispensatory. By Alfred Stillé, M. D., LL. D., and John M. Maisch, Phar. D. Second Edition, revised and enlarged. Philadelphia: Henry C. Lea. 1879.

Transactions of the Twenty-Sixth Annual Meeting of the Medical Society of the State of North Carolina. 1879.

Tracheotomy with the Galvano-Cautery. By William A. Byrd, M. D. St. Louis. 1879.